

FEATURES

- ┆ Low Forward Voltage
- ┆ Lead Free Finish/RoHS Compliant
- ┆ For Surface Mount Application and High Current Capability

SOD-323



MARKING:

MBRX0520:2 MBRX0530:3
MBRX0540:4 MBRX0560:6

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	MBRX 0520	MBRX 0530	MBRX 0540	MBRX 0560	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	20	30	40	60	V
$V_{R(RMS)}$	RMS Reverse Voltage	14	21	28	42	V
I_o	Average Rectified Output Current	0.5				A
I_{FSM}	Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	5				A
P_D	Power Dissipation	250				mW
R_{JA}	Thermal Resistance from Junction to Ambient	400				$^{\circ}\text{C}/\text{W}$
T_j	Operating Junction Temperature Range	$-40 \sim +125$				$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	$-55 \sim +150$				$^{\circ}\text{C}$

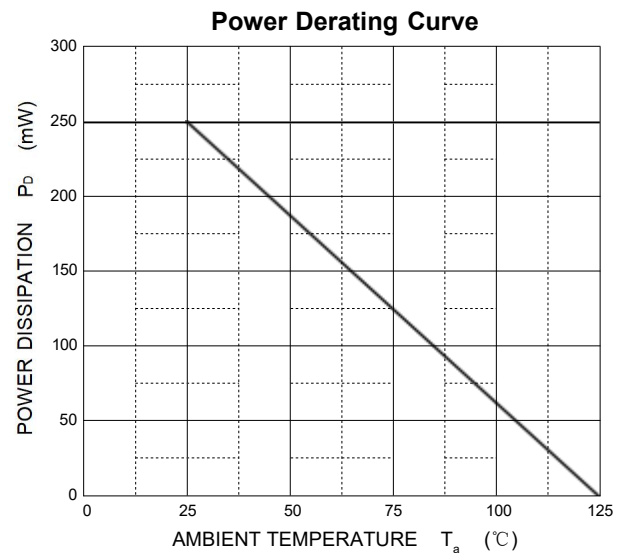
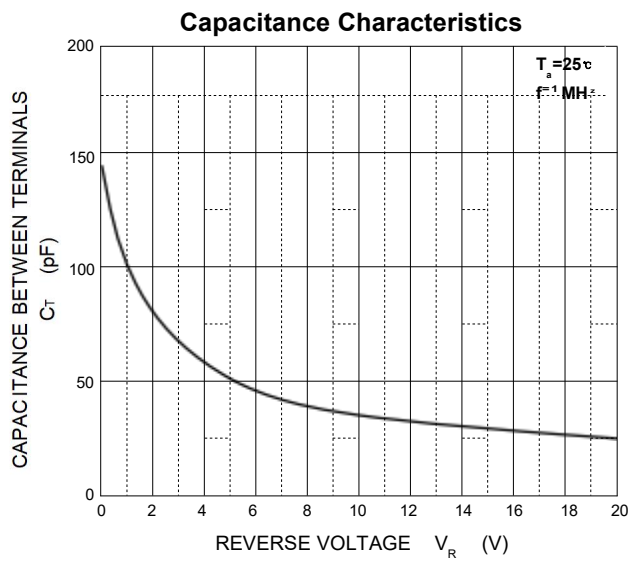
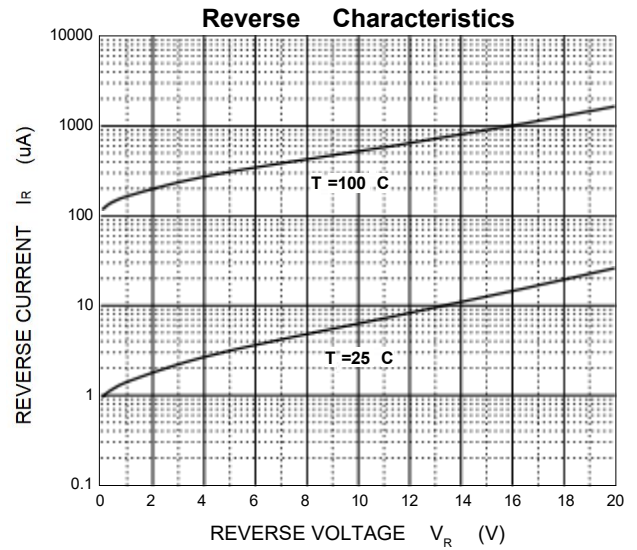
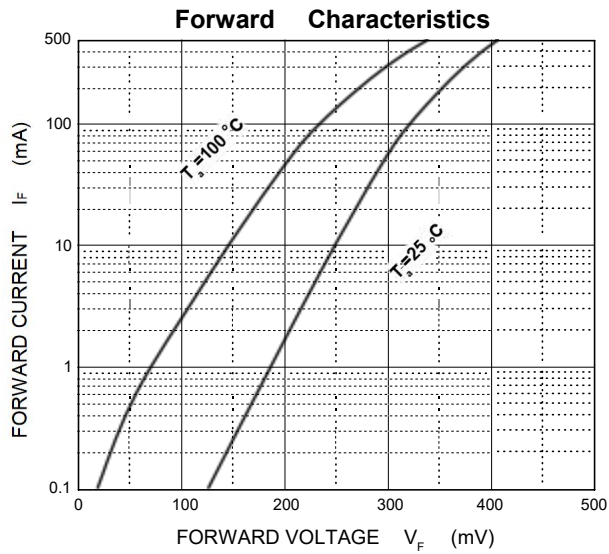
ELECTRICAL CHARACTERISTICS

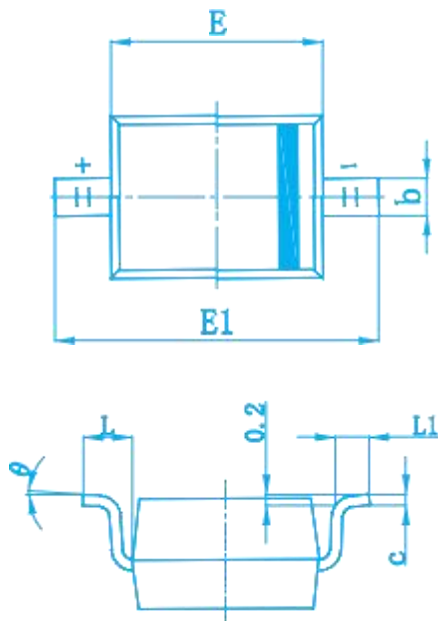
$T_a = 25^\circ\text{C}$ unless otherwise specified

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	MBRX0520	$V_{(BR)}$	$I_R = 1\text{mA}$	20			V
	MBRX0530			30			
	MBRX0540			40			
	MBRX0560			60			
Reverse current	MBRX0520	I_R	$V_R = 20\text{V}$			0.08	mA
	MBRX0530		$V_R = 30\text{V}$				
	MBRX0540		$V_R = 40\text{V}$				
	MBRX0560		$V_R = 60\text{V}$				
Forward voltage	MBRX0520	V_F	$I_F = 0.5\text{A}$			0.45	V
	MBRX0530					0.55	
	MBRX0540					0.55	
	MBRX0560					0.70	
Total capacitance		C_T	$V_R = 4\text{V}, f = 1\text{MHz}$		30		pF

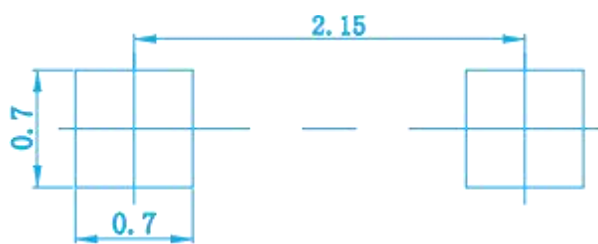
Typical Characteristics

MBRX0520



SOD-323 Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.